

July 18

A
Publication of Sur-
ueying and Measuring

of Mannors, Lands, and Lordships :

and Arts Mathematicall, Geometrie,

Astrologie, Geomancie, and the Art

of Dialling : By *Ralph Treswell*

the younger, in the *Strand* at

the signe of the Sunne Diall :

and are there to

be sold.

Also, a declaration of Concaue and Perspectiue

Glasses, which by receiuing the Sunne beames,

casteth them a farre off to any place ap-

poynted, burning extreemly

where it shall fall.

The Art of Perfuming of Gloues, Leather, Woollen;

or any other thing: with the making of all Sweet

Waters, odoriferous Poulders, and sweet

Compactions, well experimented by

my selfe in the *Strand* at the signe

of the Sunne Diall.

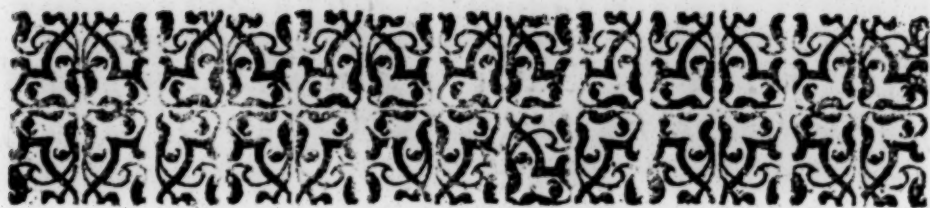
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To the Reader.



Astrologie is Mathematicall; which Art hath been of long antiquitie : and I finde by auntient Authors, the Sonnes of Seth were practisers in this Art: So famous and so excellent was Astrologie; And fearing least it should perish, for that they heard their Grandfather Adam say, a vniuersall Flood should destroy all the World; they caused to be made two Pillars: the one of them of Bricke, the other of Stone; whereupon they did ingraue their learning in the Art of Astrologie, with prouision, that if the Bricke should faile, the Stone Pillar might preserve the Letters grauen therein. And Milesius perceined the cause of the Eclipses of the Sunne and Moone; and (as Pliny writeth) marked the course of the Moone, and her operations, and changing. And the course of Venus was noted by Archimides, and the Winds by Æolus. All which Observations, wee finde true, and perceine them well. The rising and setting of the wandring Lighes in the Firmament; whereof some are fixed, and some moouable, rowling through the Zodiacke in twenty foure howers, their effect to worke with our Natures, by the influences of their motions and moouings, according to their seuerall

TO THE READER.

operations. As unto Saturne, is attributed slownesse, and
Secrecie of hidden misteries, and Boldnesse. Vnto Iupiter,
Riches and braue Attire, with good fortune. To Mars,
Blood, Choller, Hastinesse, warre, Debate, and Treason.
To the Sunne is attributed Glory, Honour, Renowne, and
Riches. To Venus, Wantonnesse and Brauery. To Mer-
cury, according as he is accompanied; but the attribution
thereof is given to Learning and Science. Vnto the
Moone (as unto all the World) unconstancie of Manners,
moueablenesse, and a wandring Minde. And for the
glory, and sure reason of Astrologie. There did appeare
in the East a bright Lampe, guiding Iasper, Melchior,
and Balthazar, promising an act famous and notable, a
King to be borne King of Kings, and Lord of Lords: By
which bright Lampe of Heauen, they were directed for
their Iourney. And that the Wise-men were asked of the
Starre seene in the East? And it was noted, At Bethelem.
And they did fore-see a glorious act to be at hand: and pro-
phecied, a King to be borne at Bethelem.



Mathematician.



ALL things which are, or haue been, are tituled and found vnder triple diuersitie generall, for either they are tearmed *Supernaturall*, or *Naturall*: betweene which two distinctions, there is a meane.

Things *Supernaturall*, are comprehended of the minde onely, shewing true demonstration of sure Art and Science.

Things *Naturall*, are contriued of the Sence, and hable to be perceiued: wherein Probabilitie and Coniecturing hath place.

A third propertie betweene *Supernaturall*, and *Naturall*, as being not so absolute as things *Supernaturall*, nor yet so base as things *Naturall*: (but *Immateriall*) whereby *Materiall* things are able somewhat to be signified, and are *Mathematicall*.

Astronomie, and *Astrologie*, are *Mathematicall*, and very neere: *Astronomie* demonstrateth the distances of *Magnitudes*, and all naturall motions: And *Astologie* demonstrateth the full effect and operations, and secret influences of the Starres and Planets, and euery Element and Elementall body in all *Horizons* purposed.

Magnitude, is *Mathematicall*: his effect and operation is tituled *Geometrie*.

The Art *Mathematicall*, demonstrateth of Numbers
A 3 and

and Magnitudes, concerning such matter as are *Mathematicall*; whose matter and doctrine concerneth so much as perfectly the matter, whose Doctrine is subiect vnto.

Geography and *Topography*, is to describe a small Circuite or portion of Ground, with the true content thereof; as the Measuring of Mannors, Lands, and Lordships.

Hidrography, is the Globe in plaine and perfect anologie, describing the Sea coastes, and the Ocean Seas.

Cosmography, is the description of the World Elementall, and *Ætheriall*; shewing his property & Celestiall circles.

Mechanetian, is a mechanicall Workeman, whose skill is without knowledge of Mathematicall demonstration, perfectly to worke and finish any sencible worke by the Mathematician principles.

*The order of working the Rule of Algeibar or
Algebra, or Cossé or Cossicall numbers.*

THis Science of working *Algeibar*, and *Amachabell*, that is the finding of any vnknowne Number by adding of a Number, and Diuision, and equation.

The Rule of *Equation*, doth signifie the state and middle part of the Rule, and hath his peculiar Characters, and principle parts of *Arethmaticke* to it apertayning, and differeth from the other *Arethmaticall* operations. This *Arethmaticke* hath numbers simple, compound, mixt, and fractions accordingly.

This Rule, and *Arethmaticke Algeibar*, is found so generall, it conteyneth the whole power of Numbers application practicall: for as *Vnites* proceed by addition to create all kind of Numbers; so the rule *Cossicall* proceedeth from the roote by Multiplication, creating all *Squares*, *Cubes*, *Zenzezenzikes*, and *Sur Solides*.

The principles of *Geometry*.

Rudiments of *Astronomy*.

The Art of *Dialing Declining Dials* :

Reclining Dials, *Inclining Dials*.

Declining, *Reclining*, *Plaine*, and *Concaue*.

The setting of the *Signes*, and *Planetarie Howers* in any *Sunne Diall* by *Geometry*.

The setting of the *Aimicantarach*, and *Azimuths* vpon *Dials*, being the *Altitude* and *Latitude* of the *Sunne*, and *Circles of position*.

Seuerall waies to take the *Inclination*, *Declination*, and *Reclination*, of any *Body* or *Ground*, whatsoeuer; and to make *Dials* accordingly,

If any *Ground* shalbe direct, or otherwise beholding the *North* or the *South*, the *East* or the *West*, which may make a blunt *Angle* with the *Horizon*, it shall be called a *Reclining ground*: If it make a sharpe *Angle*, it shall be called an *Inclining ground* : But vnderstand by the *Inclining*, and *Reclining* of the *Ground*, the neereſt distance of it from the *Zenith*, let downe into the *Horizon* by the highest poynt of the *Ground* . By the *Declining*, vnderstand by how much the *Interſection* of this *Arke* and the *Horizon*, is distant from the next *Interſection* of the *Meridian* and the *Horizon* : which distance is numbred in the *Horizon* it ſelfe.

Reclining, is ſaide to recline from the *Zenith*.

Inclining, to incline to the *Zenith*. To be further ſatiſfied, repaire to mee.

Exactly to Plot without carriage of Instruments,

and to deliuer up a Plot made by the Scale.

THE *Circumference* of a *Circle* deuided into 360. parts, to plot by *Needle*, or visuall sight, and by *protracting*.

The taking *Suruey* of any *Mannor* or *Lordſhip*, with the setting ſooth of the *Plot* by *Suruey of Booke*.

The

the Rating and Valuation of Lands, Tenements, and Woods.

To Protract any great Plot into a lesser, or a lesser into any Proportion.

To find Heights and distances, not approaching neere to them.

The Measuring of Timber, Stone, or any other solid Body.

The faire Drawing of any Plot; and the Collouring thereof.

A relation of the Orbes *Celestiall*, & Circles of Position.

The vse of the *Sphere* and *Globe*.

The order of making the *Mathematicall Jewell*, and the vse thereof: viz. *M. Blagrawe*.

The *Geometrie* of Sphæricall Triangles.

To know which of the 90. *Horizons* serue to euery Countrey.

To know the rising and setting of the Fixed Starres.

To find the Altitude of the Sunne or Moone.

To know the Sunnes place in the *Zodiacke* euery faire day seuerall waies.

To find the Latitude, or Poles eliation in any Countrey.

Of Progresions, and Directions, in *Natunities* seuerall wayes; and to include them together: with my practise in *Geomancie*.

The erecting of a Figure Astrological vpon the twelue Houses, by the *Ephimerides*, and the *Jewell*.

To know the true exact Azimuth of any Planet, Comet, or Starre vnkowne.

The Moone shining on any Sunne *Diall*, to know the Hower in the night.

The making of the Horologicall, and Geometicall *Quadrant*; with the conclusions thereunto belonging. viz.

To try to what Eliation of the Pole the *Quadrant* is made.

made.

To know every fayre day, what is the Hower of the
Equinoctiall.

To find the Sunnes place in the *Zodiacke.*

To find the Hower of the Night, and of the Day.

To find the ryſing and ſetting of the Sunne.

To find the Eleuation of the Starres aboue the *Horizon.*

To find the Eleuation of the *Pole.*

To find the Height of any Body ſtanding on plaine,
whereunto is comming by ſhadow, and by the *Quadrant.*

To find the Height of any Steeple, Hill, or other thing
whatſoeuer at once, not remouing by *Geometrie.*

Heights are ingeniouſly found out ſeuerall wayes.

To meaſure the Length of any Diſtance, and of ſeuerall
Diſtances at once not remoouing.

To meaſure the profunditude of any Pitte or Well.

To find whether Waters may be conueyed from one
place to another.

To find the Diſtances of the *Longitudes* and *Latitudes* of
any two Cities, in any part of the World by *Geometry* and
Arithmeticke.

Alſo, Bookes made out of *Geometry*, of their principles
and notable conſuſions.

The erecting of a Figure by *Geomancie*, with briefe iudi-
ciall Iudgements well experimented vpon the twelue
Houſes, for any Queſtion whatſoeuer, in a more absolute
order, then hath been written of.

The reſoluing of any reaſonable Queſtion by my *Geo-
mancie*, being no other but a part of *Aſtrologie*, lawfull and
honestly to be vſed for recreation, to exerciſe the wittie
and the ingenious Student of this naturall philoſophicall
Science.

This *Aſtrologicall* Philoſophie, *Tully* calleth it the ſtu-
die of *Wiſedome*, and ſearcher out of *Vertue*. *Eirnicus* affir-

B.

meth

meth the Starres to haue a power in the *Natiuities* and *Births* of Men, and maketh them of seuerall fashions and complexions, of good or bad disposition, according as the *Aspectes*, *Comunctions*, or *Oppositions* are; the Application of the *Celestiall* powers working with our *Terrestiall* bodies. The *Sunne* finishing his yearely *Reuolution*, the estate and growing of mans *Body* shuteth accordingly. Also, all *Trees* and *Plants* take their yearely effectes and opperations by his yearely *Reuolution*. The ouerflowing of *Waters*, by reason of the *Full* and *New Moone*. And the attribution of the *Houses*, doe signifie what may befall vnto a man in his life; as also what after death: for the first doth signifie the *Person* and his intent: The second, the *Substaunce* of a *Man*: The third, his *Neighbours* and *Kindred*, *Brothers* & *Sisters*: The fourth, the *Father*; and such things which may be propounded concerning a *Citie*, and the people therein: The fifth, the *Children*, and the *Conception* of *Sonnes* and *Daughters*: The sixt, of *Seruants* and *Subiects*, *Whoores*, *Bawdes*, and *Women* of licentions living: The seuenth, of *Marriage*, and *Theft*: The eight, of *Dowries* concerning *Women*, and things mysticall and hidden: The ninth, of *Religion*, *Church-men*, and long *Pilgrimages*: The tenth, of *Kings* and *Princes*, *Honours* and *Dignities*: The eleuenth, of a *Friend*, and the end of any *Question*: The twelſe, of *Horses* and great *Beastes*, of *Imprisonment*, and the end of a person. And the first and second *House*, signifieth the beginning & ending of *Youth*. The tenth and eleuenth, halfe mans life. The twelſe, the end of a person. The fifth, whether *Prayse* or *Infamy* after death & buriall, by which meanes *Iudgement* is giuen of any *Question* demaunded:

Quas operationes, Stella habent in nobis, quotidie videtur, & manifeste percipitur secundum Aspectus, qui si preclari sint preclara in sequuntur; vel bona vel mala ut apparet ex homicidijs, interitu,

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interitu, Senitia, Latrocinij, Coniurationibus, molestia, emulatione, & subito favore Nobilium, licet eo indigni sint homines quidam Fortunati sunt et felices absque merito, alio infelices qui bene merentur, Fortuna enim fauet & propitiatur omnibus, vel omnia euertit.

And for a further declaration, and more to satisfie for these thinges to some may seeme strange and mysticall, I haue made obseruation, and constructiue shall make plaine the Houses to agree, by a moderne Philosophicall construction, as followeth.

THe first House, the Angle of the Orient, the House of Life, the beginning of all things, signifieth the Intention of a mans Inclination, whether good or euill, disposed according to his Nature; whose effect and operation worketh, as his Condition: which may be applyed to the first Commandement.

The second signifieth the Substance & Mettall of any thing, as also being the House of *Taurus*, which the *Indies* and *Heathendoe* worship, being forbidden; and the bowing to an Image made, and of Gifts and Sacrifices good or bad. But *Noah* made the first Altar: and *Melchizedech*, *Abraham*, *Isacke*, and *Iacob*, made their offerings of a naturall deuotion, and free will: And the *Leuites* applyed the place of the *Deacons* by the commandement of *Moses*, to minister and serue *Aaron* in all the Sacrifices, Gifts, and Oblations, to be vsed with bowing and worship: for the first doth signifie the Intention: and the second, the Worthinesse thereof, and the operation of the Glory and Renowne belonging. And this to the second Commandement may appertaine.

The third House naturally signifieth a Scholler study-

ing in the Vniuersitie, and his Religion; and of his Fayth and ceremonious Vowes to God : and of Othes and Vowes to Neighbours and Friends . And this to be attributed to the third Commandement.

The fourth *House* signifieth a Citie and the people therein, whether good or badd; and of their Religion towards God, and euery mans estate; concerning the Church and his Fayth therein. And this for the fourth, To keepe *Holy the Saboth*.

The fifth naturally signifieth the Children : for the fourth signifieth the Father; and the fifth the Children, and of their honour and dutie towards their Parents . And this to be applyed to the fifth.

The sixth is the *House* of ill Fortune, the *House* of Whoores and Bawdes, and ill disposed People to Crueltie and Murther : It also signifieth the Phisitian, and the Apothecary. It is the *House* of Sorcerers and Witches, and of their Murthers, Actes, and Deedes; their Imprisonment and Deaths . And this to appertain to the sixt Commaundement, beeing forbidden, *Doe no Murther*.

The seuenth *House*, beeing the Angle of the *Occident*, signifying Debates, Quarrels, and Strifes : And of Mariage, and the Actes comming thereon : The Faythfullnesse of a Wife, and also of a Husband, to rest faythfull in their Promises and Vowes made : not to *Commit Adulterie*.

The eight, is the *House* of Death, and what shall befall a man, a fayre or euill Death. It signifieth Goods secretly stolne; and the Shame and Death of him that shall Steale. And this vnto the eight, to be applyed, *Not to Steale*.

The ninth Commandement; *Not to beare false Witnesse*: And the ninth *House* signifieth Fayth and Religion, and is called

called *The House of God*. The *House* of Iustice, and of Iudges ecclesiasticall and temporall, before whom Oathes are taken, and all ceremonious Vowes are made concerning a Neighbour or Stranger, neere or farre off.

The tenth signifieth the Honour and Reputation of a man, his well disposed Minde to the World, and his true and honest Fayth to his Neighbours, without couetous desire of any thing that is not belonging to him, shewing his dignitie and worthinesse therein. And this to the tenth: *Not to Couet from his Neighbour what is his.*

The eleuenth, maketh but a repetition of the Fifth, of a Friend and Neighbour, as well farre off, as neere at hand: And of the consolation, ayde, and fauour a man shall haue of his Friend.

The twelue, as the sixt; Men and Women of euill disposition, and of their bondages and ends.

The making of severall sorts of Fire-Glasses, who by receiuing the Sunne Beames, reflecting them backe againe, casteth Fire a farre off to any place assigned.

FOR as a plaine Glasse doth receiue the Sunnes Beames paralels, so it doth deflect them, from whence shall be throwne Beames of indifferent distance: which Beames being receiued in *Concaue Glasses*, doth so knit together, that they burne extreamely: For a *Concaue Glasse* beeing opposed to the Sunne, fitly to receiue the full power of the Sunne beames, so that the falling in together with the Sunne beames, beeing directed by reason, that if a certaine Poynt may hitt with the Marke aymed at, it shall cast the Sunne beames directly to any Poynt assigned.

By a *Concave Glasse*, to behold an Image hanging in the Ayre; which if thou be without the poynt of Inuersion, thou shalt see thy Head inuerted: thou shalt behold the Poynt with fixed and steadfast eye, till it shal come to thy sight; for where the *Cathetus* shall cut the line of Reflection, there the forme being reflected, will seeme wholly distant from the *Glasse*, how much neerer thou shalt be to the *Center*. It is made so much the greater, that it may seemed to be touched with hands. But if the portion of the *Glasse* be great, it shall make thee maruell: for if any shall come on the *Glasse* with a drawne Sword, hee shall seeme to be set vpon by another, and to haue his Hands spoyled: If thou shew a Candle, it will shew a Candle kindled in the ayre.

To behold an Image hanging in the Ayre, is to be performed by a *Cylindricall Segment*, or a *Conuex pyramidall Glasse*.

The whole Doctrine of sphericall Triangles, and of all Lines, Tangents, Secants, *Sinus rectus*, *Sinus versus*, the Beame, Subtence, Arke, and Complement; with the making of the Table of *Synus*.

The making of a *Sinicall Quadrant*, whose side or basse is *Sinus totus*, deuided into seuerall particles: out of which the Table of *Sinus* is created. For by the method of the Cannon of Cutting lines, beeing compounded, the *Quadrat* of the Beame beeing deuided into seuerall *Sinus* of the whole Circle of the *Quadrant*, the beginning beeing made from the Cannon of *Synus*; for the Beame is in a middle proportion to the right *Sinus* of the whole *Quadrant*, beeing taken from the end of the Cannon, and they beeing deducted from the *Quadrat* of the Beame, the Cutting lines of the whole *Quadrant* are giuen, and the Cannon fitted.vp.

For the Touching line of the *Circumference* is in respect of

of the Beame, as the right *Sinus* of the *Circumference*, in respect of the *Sinus* of his complement: for the seuerall *Sinuses* of the whole *Quadrant* beeing multiplyed into the Beaine, and the Plaines of them beeing deuided seuerally into the *Sinus* of their Complements, the Touching lines are knowne: As take for the *Sinus* of 30. parts 2500000. and of his complement 4330127. Therefore the Touching line of 30. parts, shall be 2886751. for as 4330127. is to 2500000. so is 5000000. to 2886751. For the *Sinus* of 2500000. Particles giuen of 30. parts, and the *Quadrat* of the Beame 5000000000000. Therefore the Cutting line of 60. parts of the assumed *Circumference* of the Complement, is 10000000: For as 25000000. is to 5000000. so is 5000000. to 10000000. Which things shall be shewen by Demonstration fully.

Also, you may haue the Suruey of any Mannor or Lordship taken by the sayd *Ralph Treswell*, or by his substitutes vnder him, as also all Plottes fairely drawne and culloured, all manner of Dials made to any Wall, painted, culloured, and gylded by the sayd Professor; and seuerall bodyes of Dials ready made, or otherwise to be made vp: or any to be taught, what is in this Scroule mentioned; with many other conclusions, which in this place were superfluous to set downe.

Those that are desirous to purchase Lands or Mannors, may there haue knowledge by Particulers and Plottes. And those that would passe away any Mannor or Lordship, may also be there prouided for, if they re-
paire to my House.

The Art of Perfuming Gloues, Fustians, Leather, Linnen, Woollen, or any other thing whatsoeuer. And to Perfume Gloues perfect white, and to be of excellent sent, and the Leather to be more whiter beeing perfumed,

med, then before : which are not done by any Perfumer.

To make all manner of sweete Poulders, white Poulder, red Poulder, blacke, and of all cullours,

To make *Pomatum* for the Hands, of seuerall sweete Oyles; and all such other things that belong to this Art of Perfuming.

FINIS.

RALPH TRESWELL in the *Strand*,
at the signe of the Sunne Diall neere
the *Exchange*.



RECORD OF TREATMENT, EXTRACTION ETC.

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Date	Particulars	
AUG 2002	pH Before or Existing	pH After
	4.5	7
	Deacidification	
	MAG-BI-CARB.	
	Adhesives	
	WHEATSTARCH PASTE E-V-A.	
	Lined / Laminated	
	Chemicals / Solvents	
	Cover Treatment	
	Other Remarks	

